

## REPORT ON BOILERS.

No. 6137

Port of Belfast Received at London Office TUES. 3 JUL 1906  
 in Survey held at Belfast Date, first Survey 1905 Aug 11 Last Survey 28 June 1906  
 Book. S.S. Ortega (Number of Visits 75) Tons { Gross 7940  
 on the Belfast Net 4522  
 Built at Belfast By whom built Harland & Wolff When built 1906  
 es made at Belfast By whom made Harland & Wolff when made  
 rs made at Belfast By whom made Harland & Wolff when made  
 uted Horse Power 1 Owners Pacific Steam N. Coy Port belonging to Liverpool

LITUBULAR BOILERS—MAIN, AUXILIARY OR DONKEY.—Manufacturers of Steel D. Colville Sons & Co.

er for record 3 Total Heating Surface of Boilers 6903 sq ft Is forced draft fitted No No. and Description of  
 ers 3 Single End Cylind. Working Pressure 215 lbs tested by hydraulic pressure to 430 lbs Date of test 23-3-06  
 of Certificate 375 Can each boiler be worked separately Yes Area of fire grate in each boiler 58 sq ft No. and Description of  
 y valves to each boiler 2 Direct Spring Area of each valve 8.29 sq Pressure to which they are adjusted 215 lbs  
 they fitted with easing gear Yes In case of donkey boilers, state whether steam from main boilers can enter the donkey boiler ✓  
 llest distance between boilers or uptakes and bunkers or woodwork 30" Mean dia. of boilers 15'-0" Length 10'-6"  
 erial of shell plates Steel Thickness 1 1/2" Range of tensile strength 29-32 tons the shell plates welded or flanged No  
 rip. of riveting: cir. seams Lap Rivet long. seams Butt Rivet Diameter of rivet holes in long. seams 1 1/2" Pitch of rivets 10"  
 of plates or width of butt straps 22 3/4" Per centages of strength of longitudinal joint rivets 92.8 Working pressure of shell by  
247 lbs Size of manhole in shell 16" x 12" Size of compensating rivets 10" No. and Description of Furnaces in each  
 er 3-Morrison Material Steel Outside diameter 47" Length of plain part top 5" Thickness of plates crown 3 1/4"  
 cription of longitudinal joint Weld No. of strengthening rings ✓ Working pressure of furnace by the rules 241 lbs Combustion chamber  
 es: Material Steel Thickness: Sides 5" Back 5" Top 5" Bottom 5" Pitch of stays to ditto: Sides 8 1/4" x 7 1/2" Back 8 1/4" x 7 1/2"  
8 1/4" x 7 1/2" If stays are fitted with nuts or riveted heads Nuts Working pressure by rule 217 lbs Material of stays Steel Diameter at  
 llest part 1 1/2" x 1 1/2" Area supported by each stay 61 1/2 sq in Working pressure by rule 257 lbs End plates in steam space: Material Steel Thickness 1 1/2"  
 h of stays 7 1/2" x 1 1/2" How are stays secured Nuts & Washers Working pressure by rule 279 lbs Material of stay Steel Diameter at smallest part 2 1/2"  
 n supported by each stay 262 1/2 sq in Working pressure by rule 246 lbs Material of Front plates at bottom Steel Thickness 1 1/2" Material of  
 er back plate Steel Thickness 1 1/2" Greatest pitch of stays 13" Working pressure of plate by rule 150 lbs Diameter of tubes 2 1/4"  
 h of tubes 4" x 4" Material of tube plates Steel Thickness: Front 1 1/2" Back 1 1/2" Mean pitch of stays 8" x 8" Pitch across wide  
 er spaces 14 1/4" Working pressures by rule 354 lbs with 7 Double Orders to Chamber tops: Material Iron Depth and thickness of  
 ler at centre 9" x (8" x 2) Length as per rule 30 1/2" Distance apart 8 1/4" Number and pitch of Stays in each 3-7 1/2"  
 rking pressure by rule 221 lbs Superheater or Steam chest: how connected to boiler ✓ Can the superheater be shut off and the boiler worked  
 arately ✓ Diameter 10" Length 10" Thickness of shell plates 1 1/2" Material Steel Description of longitudinal joint Weld Diam. of rivet  
 s 10" Pitch of rivets 10" Working pressure of shell by rules 221 lbs Diameter of flue 10" Material of flue plates Steel Thickness 1 1/2"  
 stiffened with rings ✓ Distance between rings 10" Working pressure by rules 221 lbs End plates: Thickness 1 1/2" How stayed Weld  
 rking pressure of end plates 221 lbs Area of safety valves to superheater 10" Are they fitted with easing gear ✓

## VERTICAL DONKEY BOILER—No. Description Manufacturers of steel

de at Belfast By whom made Harland & Wolff When made 1906 Where fixed On board Working pressure 215 lbs

ed by hydraulic pressure to 430 lbs Date of test 23-3-06 No. of Certificate 375 Fire grate area 58 sq ft Description of safety valves 2 Direct Spring

of safety valves 2 Area of each 8.29 sq Pressure to which they are adjusted 215 lbs If fitted with easing gear ✓ If steam from main boilers can  
 er the donkey boiler ✓ Dia. of donkey boiler 15'-0" Length 10'-6" Material of shell plates Steel Thickness 1 1/2" Range of tensile  
 length 29-32 tons Descrip. of riveting long. seams Lap Rivet Dia. of rivet holes in long. seams 1 1/2" Whether punched or drilled ✓ Pitch of rivets 10"

o of plating ✓ Per centage of strength of joint Rivets 92.8 Working pressure of shell by rules 221 lbs Thickness of shell crown plates 1 1/2"

dus of do. 3 No. of Stays to do. 3 Dia. of stays 1 1/2" Diameter of furnace Top 47" Bottom 47" Length of furnace 10'-6"

ickness of furnace plates 1 1/2" Description of joint Weld Working pressure of furnace by rules 241 lbs Thickness of furnace crown 3 1/4"

tes 10" Radius of do. 10" Stayed by Weld Diameter of uptake 10" Thickness of uptake plates 1 1/2"

ickness of water tubes 1 1/2" The foregoing is a correct description,  
for Harland & Wolff Manufacturer.

Dates { During progress of  
 Survey { work in shops - - }  
 while { During erection on  
 building { board vessel - - }  
 Total No. of visits 75

See other sheet

Is the approved plan of main boiler forwarded herewith Yes

" " " donkey " " "

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W684-0018



**GENERAL REMARKS** (State quality of workmanship, operations as to class, etc.)

*Spare Gear*

3 Crank Shafts  
 1 Propeller Shaft  
 2 M. Bronze Propeller blades  
 1 Propeller bolts.  
 2 Main Cross heads & guide blocks  
 2 Piston Rods & nuts  
 1 Pair top end bushes  
 1 - bottom -  
 2 Eccentric Rods  
 2 - Pulleys  
 2 - Straps.  
 1 Air pump rod  
 1 - basket  
 1 - delivery valve  
 1 Air pump lever bushes  
 2 Feed or Bill Pump plungers  
 2 Main slide valve & spindles  
 1 Thrust ring.  
 1 set packing rings for each piston valve  
 100 Condenser tubes  
 300 - - - - - - - - - -  
 1 set Evaporator coils & branches.  
 1 set of boiler safety valve springs  
 1 set for cyl. glands, pistons set.  
 46 boiler tubes  
 4 - - - - - - - - - -  
 15 screwed stays.  
 Large quantity of auxiliary engine & pumps & spare gear.  
 Spare armatures for Electric & car. set.  
 1 set gear to Lloyd's Rules additional

Certificate (if required) to be kept

The amount of Entry Fee...	£	See other sheet	When applied for
Special ... ..	£	:	19
Donkey Boiler Fee ...	£	:	When received.
Travelling Expenses (if any) £	:	:	19

*R. J. Reeside*  
 Engineer Surveyor to Lloyd's Register of British and Foreign Shipping.

Committee's Minute

FRI. 6 JUL 1906

Assigned

*See minute on  
 attached report*



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